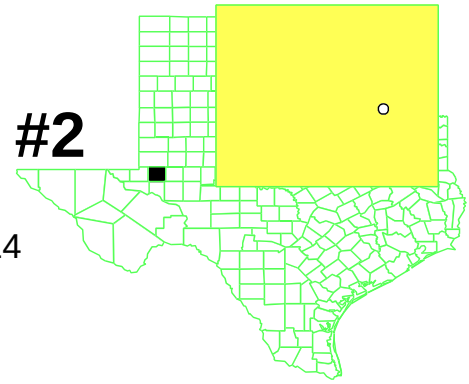
ODESSA CHROMIUM #2

TEXAS

EPA ID# TXD980697114
Site ID: 0602703



EPA REGION 6
CONGRESSIONAL DISTRICT 19
Ector County

Other Names:
Andrews Highway

Updated: May 18, 2004

Site Description

Location:

- The site is located in the vicinity of Andrews Highway between West 52nd St. and West 57th St., Odessa, Ector County, Texas.

Population:

- Approximately 3500 persons live outside the city limits within one mile of the site.

Setting:

- Nearest residence is within the site.
- Nearest drinking water well is on-site.
- Approximately 400 water wells are within 1/2-mile of the site.
- Several municipal supply wells are within 1/2-mile of the site.
- Sources of contamination are within a 15-acre industrial area outside of Odessa.
- The estimated surface projection of ground water plumes is more than 40 acres.

Hydrology:

- Trinity-Edwards aquifer is sandstone and conglomerate rock overlaid by 20 ft. to 60ft. of soil and caliche (hard-pan).
- The aquifer is 60ft. to 100 ft. thick, and underlaid by redbed clays.
- The depth to ground water at the site is 75 ft.

Wastes and Volumes

- The principal pollutant at the Odessa II site was hexavalent chromium, ranging to 9.9 ppm in the ground water.
- The estimated volume of contaminated ground water in the aquifer was estimated at 200 million gallons.

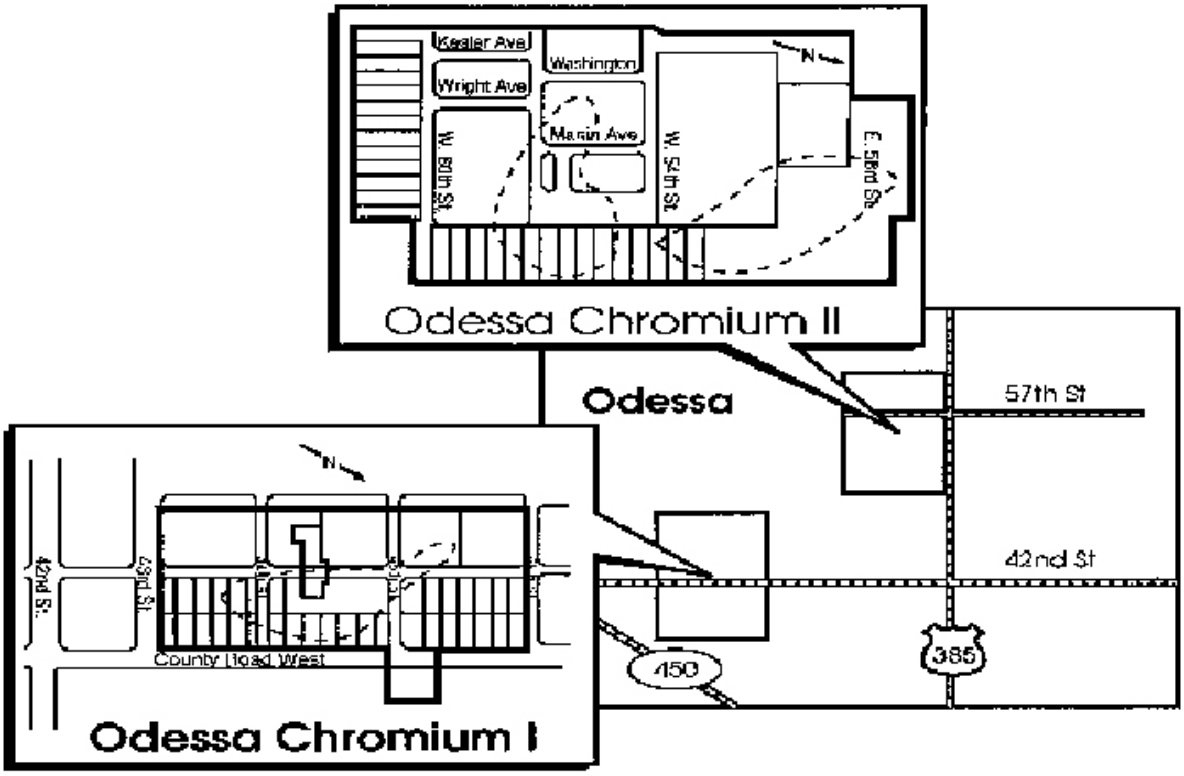
Site Assessment and Ranking

Site HRS Score: 42.24

NPL LISTING HISTORY

Proposed Date: 10/15/84
Final Date: 5/20/86
NPL Update: No. 2

Site Map and Diagram



The Record of Decision

Signed: September 8, 1986 (Alternate Water Supply)
Signed: March 18, 1988 (Source Control/Ground Water)

The Remediation Process

Site History:

- Contamination resulted from chrome plating operations from the late 1960s - 1970s.
- Cleanup at the site was divided into three phases, or operable units: development of an alternate water supply (AWS) for area residents, and cleanup of the contaminated ground water (Source Control/Ground Water). The latter phase deals with operable units two and three, a north plume of contamination under an enforcement scenario with potentially responsible parties (PRPs) funding the cleanup, and a south plume under a "Fund-lead" scenario (cost-recovery only).
- The Remedial Investigations and Feasibility Studies (RI/FS) for the AWS and remediation phases were completed in September 1986 (AWS) and March 1988 (Source/Ground Water).
- The RI/FS and South Plume activities were conducted by the Texas Commission on Environmental Quality(TCEQ) formerly known as Texas Natural Resource Conservation Commission (TNRCC).

Health Considerations:

- More than a 40-acre portion of the sole source aquifer (Trinity) showed contamination.
- 14 out of 318 wells sampled show total chromium at or above the drinking water standard which was .05 milligrams/liter (mg/l) at the onset of remediation activities.
- Affected wells are outside of city water supply service area.

Alternate Water Supply Phase (AWS):

- For this phase, the Record of Decision (ROD) calls for an extension of the existing municipal water supply system to those persons residing within the impacted area.

Source Control/Ground Water:

- This ROD selected extraction and electrochemical treatment of contaminated ground water from the Trinity Aquifer, for the South Plume.
- The ROD was changed, through an ESD, to an ION exchange treatment for the North Plume.

Other Remedies Considered	Reason Not Chosen
----------Alternate Water Supply----------	
1. "No Action"	**Did not meet remedial objectives; not protective of human health and the environment**
2. Development of surface water supply	**High monthly water bills for users, Water Association must be formed**
3. Removal via treatment	**Stringent operational review required to insure contaminants are properly removed**
4. Development of new well field	**Long term supply of water questionable**
----------Source Control/Ground Water----------	
1. "No Action"	**Did not meet remedial objectives; not protective**
of	**human health or the environment**
2. Containment Wall	**Difficult to implement; high cost to uses**
3. Ion Exchange	**System will generate a hazardous sludge**
4. Chemical Treatment	**Treatment may increase TDS of ground water**

- The action level for chromium contamination in ground water was revised from 0.05 mg/l to 0.10 mg/l to reflect the new drinking water standards promulgated in the Federal Register No. 3528 on January 30, 1991.

Community Involvement

- Community Involvement Plan: Developed 6/85, revised 9/89, and again in 12/92.
- Open houses and workshops: 4/86, 12/87, 9/89, 1/91
- Proposed Plan Fact Sheet and Public Meeting: 7/86 (AWS), 1/88 (Source/Ground Water)
- ROD Fact Sheet: 9/86 (AWS), 3/88 (Source/Ground Water)
- Milestone Fact Sheets: 1/85, 8/85, 12/87, 3/90, 9/90 (TWC), 12/90 (TWC), 1/91 (TWC), 8/94 (TNRCC), Explanation of Significant Differences Notice 10/94.
- Citizens on mailing list: 33
- Constituency Interest: Low to moderate concerns regarding site after alternate water supply was brought on-line.
- Site Repositories: (1) Ector County Library, 321 West Fifth Street, Odessa, TX 79761

(2) EPA's Region 6, files in Dallas, Texas; Please call first,
Contact 1(800) 887-6063 for file viewing information and hours open
or written request through Freedom of Information Act (FOIA),
FOIA Officer, Jerva Duram:
1445 Ross Avenue, Dallas, Tx. 75202
(3) Texas Commission On Environmental Quality (TCEQ), files in Austin, Tx.
:
Contact: Telephone (512) 239-2920 for file viewing information and hours
open;
Address: TCEQ - Records
(Mail Code 199) , Building D,
P.O. Box 13087
Austin, Texas 78711

Technical Assistance Grant

- Availability Notice: 4/11/89
- Letters of Intent Received: 1) Gerald Fugit, Chrom Sites, Inc. - 12/20/90
- Draft Application Received: 4/10/91
- Grant Award: None - application denied
- Current Status: No TAG in process.

Contacts

- **Remedial Project Manager (EPA):** Ernest Franke PE, 214-665-8521, Mail Code: 6SF-AP or
- **State Project Manager(TCEQ):** James Feeley , PE 512/239-2461
- **Community Involvement :** Ernest Franke PE, 214-665-8521, Mail Code: 6SF-AP
- **Attorney (EPA):** Anne Foster, 214-665-2169, Mail Code: 6RC-S
- **State Coordinator (EPA):** Karen Bond, 214-665-6682, Mail Code: 6SF-AP
- **Regional Public Liaison (EPA):**Arnold Ondarza , 303-312-6777
- **Engineering:** South Plume: IT Corporation
- **Prime Contractor/s:** Panhandle Construction Co. (AWS)
  South Plume: Waste Abatement Technology (Pump and Treat GW & Ferrous Sulfate Treatment through 8/30/01, IT Corp.
- **Engineering:** North Plume: ERM Southwest, Ron Grimes, Project Manager
  Bureau of Reclamation (EPA Oversight of North Plume)

Present Status and Issues

- The residents around the Odessa Chromium #2 site are now provided with safe drinking water, eliminating possible health threats while ground water cleanup activities continue to reduce contamination at the site.
- The Remedial Design for the North Plume included both electrochemical treatment and ion exchange with resin recycling (thus addressing waste sludge concerns). The Remedial Action is proceeding for ion exchange.
- An Explanation of Significant Differences (ESD) for the change from electrochemical treatment to ion exchange for the North Plume was signed June 28, 1994. The public was notified in October of 1994. shutdown with only two perch zone wells being pumped at the South plume and the water is measured separately and transported to Odessa Chromium I for treatment.
- Explanation of Significant Difference Notice (ESD) to ROD, adding in situ Ferrous Sulfate treatment has been signed/approved by EPA on 10/25/99

- The Odessa Chromium II, North and South Plume remedy has achieved the remediation goals in the Trinity Aquifer wells. De-mobilization of the treatment plant equipment and de-contamination of the treatment plant was completed as of February 9, 2001, in the South Plume site.
- The remaining activity is underway, as SEQUA has submitted to EPA and comments issued by EPA on the Draft Post Closure Report/O&M Plan EPA.
- Sequa's - North Plume Post Closure RA Report dated May 8, 2003, and
& TCEQ South Plume Post Closure RA Report dated January 2002 have been received by EPA.
- The ESD for Odessa Chromium #2, both the North and South Plumes, was signed on 9/10/03, and EPA's final RA Closeout Report for the same was signed on 9/18/03 achieving the site remediation goal.
- The Closeout Report verifying Odessa Chromium II, North and South Plume remedy remediation was signed by EPA September 18,2003
- The One-Step Notice of Deletion and Deletion Notice was signed by EPA April 04, 2004

Benefits

- A safe alternate drinking water in the Trinity Aquifer is being provided for approximately 3,500 people living and/or being supplied potable water that flows through, or in the immediate area of the north and south plume remediated site areas.